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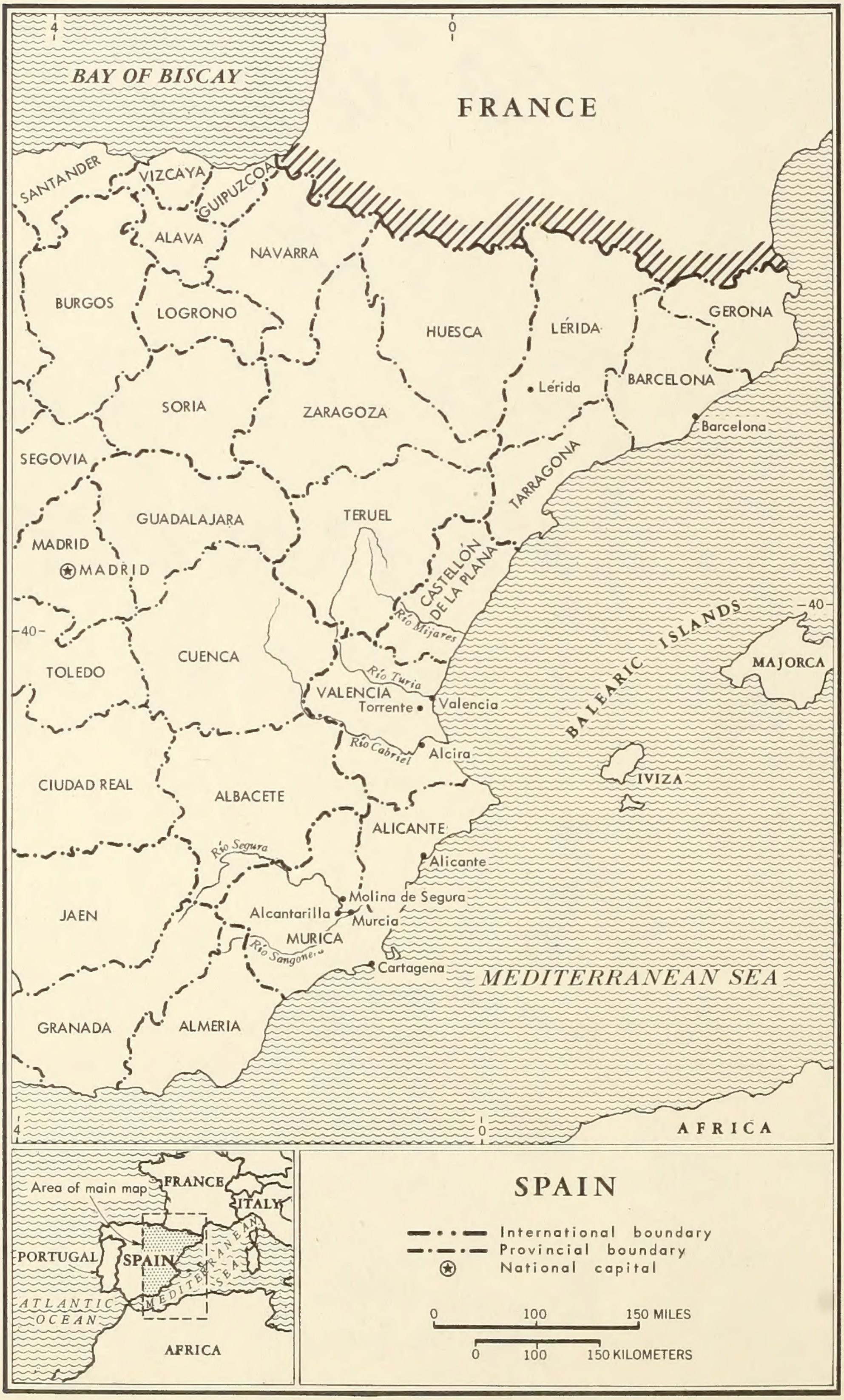
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Foreword

Spanish canned deciduous fruits have been making their presence felt in world trade during recent years. To evaluate the potential of this industry, an on-the-spot study was made in 1960 as a cooperative undertaking of the U. S. canned fruit industry and the Foreign Agricultural Service.

The United States is by far the largest producer of canned deciduous fruits, accounting for over 70 percent of the world's production. Australia ranks second and South Africa usually ranks third, with a combined production of less than 10 percent of the total. Canada, West Germany, Japan, Spain, and the United Kingdom produce about 15 percent. Of this group of secondary producers, Spain is probably the most important.

Its growers are increasing their plantings and its canners are modernizing their plants and working to improve the quality of their products, with increased export sales as their objective.

D. M. Rubel, Director
Fruit and Vegetable Division

Acknowledgments

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The cooperation and assistance of the U. S. Agricultural Attaché's office in Madrid and the American Consulate in Valencia were very helpful also.

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THE DECIDUOUS FRUIT CANNING INDUSTRY OF SPAIN

by

Frank C. Elliott
~~The Canners League of California~~

and

Harry C. Bryan
Fruit and Vegetable Division

Outlook and Summary

Increased competition from Spanish canned deciduous fruits can be expected in the United Kingdom and continental markets as Spanish brands become known and consistent quality pack becomes apparent.

The Spanish deciduous canning industry has a great potential. During the past 5 years, Spain has ranked third or fourth among the canned fruit exporting countries. The size of Spain's canned pack was estimated at 3.3 million cases--24/2½--in 1958, the latest year for which data are available.

The Spanish industry is similar to Australia's and South Africa's in that it exports a majority of its canned fruit production and depends upon the United Kingdom as its principal market. In the past, most of the Spanish production consisted of the so-called pulp or solid fruit pack--mainly apricots and peaches which were intended for repacking in the importing countries. But in the last few years, the Spanish industry has begun to pack a larger percentage of its

TABLE 1.--World production: canned deciduous fruits, specified countries, averages 1934-38 and 1953-57, annual 1956-59

Country	Average		1956-57	1957-58	1958-59	1959-60
	1934-38	1953-57				
	1,000 cases 24/2½'s	*1,000 cases* 24/2½'s	*1,000 cases* 24/2½'s	*1,000 cases* 24/2½'s	*1,000 cases* 24/2½'s	*1,000 cases* 24/2½'s
Argentina................	(1)	891	620	1,750	1,520	--
Australia................	2,433	5,142	4,760	5,721	4,359	5,237
Canada..................	1,130	3,117	2,823	3,301	3,049	2,807
Denmark.................	(1)	43	64	57	109	--
France[2].................	(1)	80	35	65	95	80
Germany, W.	(1)	1,667	2,356	1,406	2,671	2,821
Italy.....................	(1)	[3] 1,008	1,095	1,095	1,150	--
Japan....................	(1)	1,406	2,102	2,788	2,361	--
Netherlands..............	(1)	1,288	1,683	1,019	2,143	--
Spain[4]...................	(1)	2,233	2,935	2,987	2,814	2,356
Rep. of South Africa.....	273	2,880	2,764	4,060	3,467	4,262
United Kingdom...........	(1)	2,649	3,580	2,693	3,057	3,549
United States............	30,096	63,119	71,059	65,216	64,131	77,638
Total.................	33,932	85,523	95,876	92,158	90,926	--

[1] Not available.
[2] Exports, canned fruit in sirup.
[3] Four-year average, 1954-57.
[4] Exports, all canned fruits.

TABLE 2.--World exports: Canned deciduous fruits, specified countries, averages 1934-38 and 1953-57, marketing seasons 1956-59

Country	Average		1956-57	1957-58	1958-59	1959-60
	1934-38	1953-57				
	1,000 cases 24/2½'s	*1,000 cases 24/2½'s*	*1,000 cases 24/2½'s*	*1,000 cases 24/2½'s*	*1,000 cases 24/2½'s*	*1,000 cases 24/2½'s*
Argentina...............	--	[1] 308.7	230.0	673.9	536.2	102.5
Australia...............	1,469.0	3,360.6	2,536.0	3,427.0	3,113.0	3,605.0
Belgium-Luxembourg......	19.9	132.2	172.2	78.5	243.7	146.2
Canada..................	538.4	88.2	78.1	147.5	143.1	98.6
Italy[2]................	--	193.2	235.9	195.4	340.1	478.1
Japan...................	--	42.6	74.8	108.7	224.0	217.8
Netherlands.............	--	428.3	498.8	49.4	105.0	125.9
Spain...................	--	2,232.5	2,935.3	2,987.0	2,813.8	2,355.7
Rep. of South Africa....	--	2,198.6	2,367.3	2,849.7	2,530.0	2,829.4
United States...........	5,077.9	3,607.9	4,545.3	5,195.4	4,248.6	5,983.0
Total.................	7,105.2	12,592.8	13,673.7	15,712.5	14,297.5	15,942.2

[1] 4-year average, 1953 not available.
[2] With sugar only.

production in sirup in consumer-size cans, with the principal products being peaches, apricots, and fruit salad. In the future the amount of fruit canned in consumer-size cans is expected to show a large increase, and almost all of it will be packed in the Murcia area. This is Spain's main processing area, which produces about 90 percent of the "pulp" pack and 70 percent of the fruits canned in sirup.

In the Murcia area also, a new can manufacturing plant began production in 1960, and will eventually replace can manufacturing by each cannery.

Some of the leading canners are contemplating the establishment of export standards for canned fruits. The lack of consistent quality has been one of the major drawbacks in consumer acceptance in the importing countries. According to the U.K. importing trade, the quality of Spanish canned fruits has steadily improved, gradually erasing buyers' prejudices of the past. Spanish canned fruits on the U.K. market are consistently priced below those from other exporting countries.

The Spanish industry now is attempting to modernize its plants. Even though most plants do not have the latest machinery, their canning practices are good under the circumstances.

Production of fresh deciduous fruits has been increasing gradually in Spain. In the Murcia area, large increases have taken place in the past 5 years and, in the past 2 years, hundreds of apricot and peach trees have been planted and additional plantings are planned.[1] As these plantings come into bearing, increased fresh fruit supplies will tend to reduce the present high cost of fruit to the canners.

Production and Acreage of Fresh Fruits

Deciduous fruits are grown over a wide area of Spain, with the heaviest concentration in the northeast and Levante region. Production has been increasing over the past 20 years, with apricots and peaches taking the lead for canning. (Pears and cherries are important to this survey only to the extent that they are used for fruit salad and fruit cocktail.)

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[1] According to trade sources. Data are not available for 1959 and 1960 acreage and tree numbers.

TABLE 3.--Specialized acreage,[1], tree numbers,[2], and production: Deciduous fruit, fresh, Spain, average 1931-35, 1941-45, and 1951-55, annual 1955-60

Year	APRICOTS			PEACHES		
	Acreage	Tree numbers	Production	Acreage	Tree numbers	Production
	1,000 acres	*Thousands*	*1,000 Short tons*	*1,000 acres*	*Thousands*	*1,000 Short tons*
Average:						
1931-35	7	1,501	84.7	11	3,125	72.3
1941-45	9	1,638	74.8	12	3,481	77.9
1951-55	10	1,804	68.3	16	4,269	114.1
Annual:						
1955	11	1,944	65.9	19	4,679	84.8
1956	11	2,109	86.6	13	3,906	86.1
1957	12	2,150	92.8	13	3,959	92.6
1958	17	2,611	137.5	15	4,250	91.1
1959	(3)	(3)	[4] 113.5	(3)	(3)	[4] 84.9
1960	(3)	(3)	[4] 91.5	(3)	(3)	[4] 102.5
	PEARS			CHERRIES		
Average:						
1931-35	6	2,371	81.4	3	1,581	41.4
1941-45	6	2,676	66.8	2	1,662	36.2
1951-55	8	3,109	84.4	3	1,835	38.1
Annual:						
1955	9	3,332	86.2	3	1,873	41.9
1956	9	3,764	106.0	2	2,002	42.7
1957	10	3,751	116.1	2	2,063	49.2
1958	10	3,801	119.4	2	2,180	55.7
1959	(3)	(3)	[4] 102.5	(3)	(3)	[4] 48.5
1960	(3)	(3)	[4] 110.2	(3)	(3)	[4] 44.1

[1] Does not include mixed plantings.
[2] Bearing and nonbearing trees.
[3] Not available.
[4] Preliminary.

Apricots

The acreage of specialized[2] apricot plantings increased from 9,000 acres in 1939 to 17,000 in 1958, and the tree numbers--including trees in mixed plantings--from 1.5 million to 2.6 million. Beginning in 1956, apricot production showed a large increase over previous years, with a record harvest of 137,500 short tons in 1958.

The Levante region produces about 65 percent of Spain's apricot crop. Murcia is the largest producing Province in the region, accounting for about 45 percent of Spain's apricot pack. The other Province, Valencia, produces about 15 percent. Outside the Levante region, the Balearic Island produces the next largest amount of apricots. However, production in this Province is utilized mostly in drying.

In Murcia, specialized apricot plantings almost tripled from 1950 to 1958--3,205 to 8,896 acres. The increase in tree numbers has taken place almost entirely on specialized acreage. This increase amounted to 461,000 trees; the number of trees in mixed plantings increased only 1,400.

---

[2] Specialized plantings contain no other crops.

TABLE 4.--Apricots, fresh: Acreage and tree numbers, specialized plantings, mixed plantings, total tree numbers and productions, selected Provinces, Spain, 1950, 1954, and 1958

Province	Specialized plantings						Mixed plantings			Total tree numbers[1]			Total production		
	Acreage			Tree numbers[1]			Tree numbers[1]								
	1950	1954	1958	1950	1954	1958	1950	1954	1958	1950	1954	1958	1950	1954	1958
	Acres	Acres	Acres	Thousands	Thousands	Thousands	Thousands	Thousands	Thousands	Thousands	Thousands	Thousands	Short tons	Short tons	Short tons
Albacete	729	741	778	45.9	46.7	49.0	19.5	19.5	19.8	65.4	66.2	68.8	2,959	3,289	3,648
Alicante	487	494	568	29.7	30.1	34.6	39.4	39.4	43.3	69.1	69.5	77.9	1,520	1,147	2,573
Baleares	3,089	2,718	2,397	188.4	165.8	146.2	76.0	68.0	30.0	264.4	233.8	176.2	8,714	1,541	4,256
Castellon	247	198	272	20.0	16.0	22.0	47.0	60.0	60.0	67.0	76.0	82.0	1,846	2,513	2,712
Murcia	3,205	3,534	8,896	259.6	286.3	720.6	218.6	218.6	220.0	478.2	504.9	940.6	30,563	27,813	77,712
Valencia	692	692	2,051	83.7	83.7	248.2	86.0	94.0	105.0	169.7	177.7	353.2	9,370	9,810	23,413
Other	1,057	1,235	2,384	80.9	94.0	157.5	556.3	563.2	754.4	637.2	657.2	911.9	18,142	17,512	23,228
Total	9,506	9,612	17,346	708.2	722.6	1,378.1	1,042.8	1,062.7	1,232.5	1,751.0	1,785.3	2,610.6	73,114	63,625	137,542

[1] Both bearing and nonbearing trees.

TABLE 5.--Peaches, fresh: Acreage and tree numbers, specialized plantings, mixed plantings, total tree numbers and productions, selected Provinces, Spain, 1950, 1954, and 1958

Province	Specialized plantings						Mixed plantings			Total tree numbers[1]			Total production		
	Acreage			Tree numbers[1]			Tree numbers[1]								
	1950	1954	1958	1950	1954	1958	1950	1954	1958	1950	1954	1958	1950	1954	1958
	Acres	Acres	Acres	Thousands	Thousands	Thousands	Thousands	Thousands	Thousands	Thousands	Thousands	Thousands	Short tons	Short tons	Short tons
Albacete	42	49	74	4.2	5.0	7.5	9.6	9.4	12.7	13.8	14.4	20.2	305	350	534
Alicante	168	148	222	18.8	16.6	24.9	33.6	33.6	41.9	52.4	50.2	66.8	347	277	442
Barcelona	8,273	10,452	3,583	1,340.2	1,693.2	580.4	58.0	78.0	35.0	1,398.2	1,771.2	615.4	50,824	74,141	20,337
Lerida	--	222	272	--	10.9	18.8	165.9	193.6	222.3	165.9	204.5	241.1	2,926	4,507	2,126
Murcia	1,201	1,310	3,015	194.6	212.2	488.4	210.2	210.2	200.0	404.8	422.4	688.4	10,257	11,634	18,960
Tarragona	516	2,866	2,965	37.7	209.2	358.8	147.2	106.0	110.2	184.9	315.2	469.0	4,279	7,286	12,440
Valencia	148	161	1,161	21.6	23.5	169.5	3.5	76.6	85.0	25.1	100.1	254.5	2,621	2,205	7,005
Others	1,963	2,158	3,448	177.4	190.7	245.6	1,314.1	1,387.2	1,648.7	1,491.5	1,577.9	1,894.3	27,034	29,188	29,214
Total	12,311	17,366	14,740	1,794.5	2,361.3	1,893.9	1,942.1	2,094.6	2,355.8	3,736.6	4,455.9	4,249.7	98,593	129,588	91,058

[1] Both bearing and nonbearing trees.

According to trade sources, Murcia had more than 1.2 million apricot trees in 1960, and additional plantings were planned.

In the Province of Valencia, specialized apricot acreage also about tripled, increasing from 692 acres in 1950 to 2,051 in 1958. As in Murcia, the increase in total number of apricot trees--from 169,700 to 353,200 in the 9-year period--occurred largely through plantings in specialized acreage.

In the Murcia area, the Bulida variety of apricot--used almost entirely for canning--is the heaviest bearing in Spain. It is well thought of also because of its natural richness, aroma, and flavor. It holds up well in canning. According to Spanish canners, the Bulida grown in the Murcia area is superior to that variety grown in any other part of the world. Other apricot varieties include Canino, Paviet, Mauricios, and Monequi (or San Fernando).

Flowering of the Bulida is usually so profuse that it is necessary to remove some of the blooms to insure large-size fruit and prevent damage to the trees. Average yield per tree is about 125 pounds and, in an ideal season, production will go above 165 pounds per tree. Average production per acre of apricots in specialized plantings is about 10,000 pounds of fresh fruit.

In the Valencia area, apricot yield per tree is somewhat lower, averaging about 100 pounds. But production per acre is larger, in the neighborhood of 12,000 pounds. This larger production per acre in Valencia is due mainly to more trees per acre and the smaller sized fruit.

Peaches

The acreage of specialized peach plantings increased gradually from 11,000 acres in 1939 to 19,000 acres in 1955. However, freezes in 1955 and 1956 and some pullouts reduced acreage. Since that time, it accelerated again, and in 1958 was up to 15,000 acres. Total tree numbers also followed this pattern, but in 1958 they were estimated at 4,250,000--down about 10 percent from the high reached in 1955.

Of course, following the reduction in trees, peach production dropped, but by 1960 had partially recovered to an estimated 102,500 short tons.

Specialized peach orchard in Alcantarilla, Spain's Murcia Province, which is the country's principal fruit-canning area.

Specialized peach orchard in early spring near Alcantarilla, Spain's Murcia Province, the country's principal fruit-canning area, which is noted for the excellence of its peaches and apricots. (Pictured in the foreground is a legume crop, Faba, grown widely in the Mediterranean for feed.

A shift in the peach producing areas of Spain began to take place in the mid-1950's. Earlier, the Provinces of Tarragona and Murcia had gradually begun to increase their plantings of peaches but were far behind Barcelona, which produced 74,141 short tons in 1954 and had 1.8 million peach trees with most of them planted in 10,452 acres of specialized orchards. Then, Barcelona suffered serious tree losses from freezes in 1955 and 1956.

It has not yet recovered and, in 1958, the up-and-coming peach producing areas were Murcia and Tarragona. The Provinces of Lerida and Valencia also began to increase their peach plantings. (Of these areas, Barcelona and Lerida are the only ones that produce primarily for the fresh fruit market.)

Murcia had the largest number of peach trees in 1958--688,400--followed by Barcelona with 615,400 and Tarragona with 469,000. Barcelona, however, still had the most specialized acreage with 3,583 acres--down from 10,452 in 1954--but both Murcia and Tarragona were close behind with 3,015 and 2,965 acres, respectively.

Murcia's plantings of peach trees in 1959 and 1960, according to the Spanish trade, were increasing at a faster rate than in previous years. In 1960 the total number of peach trees in Murcia was estimated to have exceeded 1 million, and additional plantings were taking place.

In both the Murcia and Valencia areas, production of peaches per tree is about the same, averaging about 60 pounds. However, the Murcia area produced more fruit per acre--about 10,000 pounds of fresh fruit compared with 8,500 pounds in the Valencia area.

Some of the peach varieties include May Flower, Amsden, and San Lorenzo. The Williams (Bartlett) variety of pear is most favored for canning.

Pears and Cherries

Production of other deciduous fruits--mostly pears and cherries--is scattered over the northern provinces. Some increases in the number of pear trees were reported in the Murcia area. One canner stated that he had planted 100,000 trees. It was reported that recently 1 million pear trees had been imported--Williams (Bartlett) variety--in a move to ultimately make Spain self-sufficient in pear production. At the present time, fresh pears are being imported to supplement domestic production in packing fruit salad.

Pears.--Acreage, tree numbers, and production of pears has gradually increased. In 1958, specialized acreage was estimated at 10,000 acres and 3.8 million trees, the largest number recorded. Pear production in 1960 was estimated at 110,200 short tons, about the average for the past 5 years.

Cherries.--Specialized plantings of cherry trees increased from 1939 to 1955 but in 1956 dropped slightly and in 1958 were estimated in the range of 2,000 acres. Total tree numbers in 1958 were estimated at 2.2 million, the highest number on record. Production in 1960 was estimated at 44,100 short tons, down about 21 percent from the high of 55,700 tons reached in 1958.

Disease and Pests

Diseases have not been too much of a problem in fresh fruit production, according to the Spanish canners, and about the only pest is the Mediterranean fruit fly. Apricots are usually harvested before the fruit fly season. Peaches which are harvested later are damaged if left on the trees and become overly ripe. Almost all producers use bait trays for controlling the fruit fly. Some of the larger commercial producers use power sprayers with modern pesticides.

Fertilizer

Animal manure is the most widely used fertilizer, with the larger fruit producers also using commercial fertilizers in addition.

When manure is used, each tree gets about 8-10 pounds and a side dressing of 1 pound of nitrogen.

The main commercial fertilizers used are calcium superphosphate, potassium sulfate, ammonium sulfate, and Chilean nitrate.

Commercial fertilizer--when used--is applied at the rate of 500-600 pounds per acre. The recommended composition is as follows:

	Percent
Superphosphate	50-55
Ammonium compounds ...	35-40
Potassium sulfate..........	10-15

Main Producing Areas

The Levante region produces most of Spain's deciduous fruits used for canning. Production in the northern area can be--and often is--used to supplement production of the Levante region.

In the Levante region, two areas are the big producers: Murcia, comprised of the three Provinces, Murcia, Albacete, and Alicante; and Valencia, composed of the two Provinces, Valencia and Castellon.

The so-called Murcia area is located in southeast Spain along the 38th parallel. The main deciduous areas are confined to the Segura and Sangonera Valleys, as is most of other agriculture. This area is noted for the excellent quality of its apricots and peaches.

Murcia's climate and growing conditions are similar to those of California. Average monthly temperature in August and January is 79° F. and 54°, respectively, and agriculture is dependent on irrigation, as the average annual rainfall is only 11 inches. The Segura River and shallow wells provide water for irrigation.

Mixed orchard of citrus and apricot trees, Murcia area. In this area, where agriculture depends on irrigation, intercropping and mixed plantings are common practices.

The irrigated cropland is used intensively. Intercropping of vegetables with the orchards and mixed plantings within the orchard are the rule. Expansion of irrigated cropland has been limited by the water supply from the Segura River. Recently, however, new land has been leveled and wells drilled (about 300 feet in depth). This is expensive and has not been carried out on a large scale, except by some of the canners who want to expand and insure a continuous supply of fresh fruit.

The Valencia area, composed of the Provinces of Valencia and Castellon De La Plana, borders the Mediterranean Sea. This area is noted more for producing citrus than deciduous fruits (mainly peaches, apricots, and some pears).

The climate and growing conditions in this area are also like California's. Average monthly temperature in August and January is 76° F. and 50°, respectively. Annual rainfall is about 16 inches. The irrigation system in the area dates back to the Moors in the Middle Ages. Shallow wells and the Turka, Cabriel, and Mijares Rivers are the main water sources.

Spain's other important deciduous fruit area is the northern region. There, production for canning is centered in the province of Lerida, and production in the other areas is used mainly in the fresh market in Barcelona and for fresh fruit export. The climate in this area is a little colder than in the Levante, and with a little more precipitation. However, the use of irrigation has increased in the numerous valleys of this northern area. Peaches, pears, cherries, and apples are the main deciduous fruits grown.

Climate

	Annual average rainfall	Max. monthly average temperature (Aug.)	Min. monthly average temperature (Jan.)
	Inches	Degrees F.	Degrees F.
Saragossa (Aragon)........	12	74.7	42.1
Barcelona (Catalonia).....	23	75.6	48.9
Valencia (Levante).........	16	76.3	50.0
Murcia (Levante)...........	11	79.3	50.4

	Clear days	Cloudy days	Overcast days
	per year	per year	per year
Saragossa	128	183	54
Barcelona	92	190	83
Valencia	139	170	56
Murcia	148	151	66

Land Values

In Spain, irrigated deciduous orchards or irrigated land suitable for orchards is extremely high priced. Producing apricot and peach orchards ranged from $5,000 to $10,000 per acre in the Murcia and Valencia areas. In the Murcia area, land suitable for irrigation but not irrigated was obtainable at about $100 per acre in 1960.

Orchard Sizes

Most of the deciduous orchards in Murcia are small--often less than an acre. There are some large orchards--most of which are owned or controlled by large canneries--but not on the scale as those of California. Fragmented land ownership, design of the irrigation system, and the high cost of land are expected to retard the development of economical-size units.

Orchards in the Valencia area, for the most part, are larger, probably averaging 2 or 3 acres.

In the Murcia area, apricot trees are large and, in specialized orchards there are about 80 trees per acre. In the adjoining Province of Albacete, the trees are even larger and the number per acre is about 65. In the Valencia area the trees are smaller and, in specialized orchards, there are about 120 per acre.

In the Murcia area, the peach trees are thin, upright, and closely spaced; specialized orchards contain about 160 per acre. In the Valencia area, the trees are somewhat larger and not so closely spaced. Plantings there average about 145 trees per acre.

Raw Product Procurement

Fresh deciduous fruit buying in Spain is unique. Apricots--by tree or orchard--are generally bought before maturity and in some cases even while the trees are in bloom--on a weight basis. Peaches are bought later in the season, near maturity, but also while the fruit is still on the tree. The grower is paid an agreed price per pound for the estimated production at the time of sale.

It was reported that buyers seldom lose by buying fruit in this manner, since they have become proficient in their production estimates and usually have been buying from the same orchards for many years.

The grower can either be paid in full at the time of sale or receive part then and the remainder when the fruit is harvested. He usually does not receive any premium for the quality or condition of the fruit. Quality, size, and condition of the fruit become involved in the sale price only in those sales made later in the season when factors of supply and demand are also considered.

At the time of sale the ownership of the fruit is transferred to the buyer. He assumes all responsibility for the fruit including weather and disease losses. He benefits if production is larger than that estimated and loses if yields prove smaller. Also, he is responsible for harvest arrangements, transportation, and so forth. The grower's only responsibility is to keep the orchard in good condition--which is to his advantage anyway.

This type of purchasing of fresh fruit leads to speculation. In some years, fresh fruit may change ownership as often as six times before the fruit is even harvested.

Fresh Fruit Cost to Canners

Cost of fresh deciduous fruit to Spanish canners is probably the most expensive item in their canning operation. It is considerably higher than in the United States and the British Commonwealth.

TABLE 6.--Fresh fruit prices paid to growers by canners for fruit at the orchard in selected areas, Spain, annual 1955-60

Area, commodity & year	Minimum		Medium		Maximum	
	Peseta per kilo	*U.S. dol. per Short ton*	*Peseta per kilo*	*U.S. dol. per Short ton*	*Peseta per kilo*	*U.S. dol. per Short ton*
Murcia:						
Apricots:						
1955................	4.25	(1)	5.00	(1)	5.50	(1)
1956................	4.50	(1)	5.00	(1)	5.50	(1)
1957................	4.50	(1)	5.25	(1)	5.75	(1)
1958................	5.00	(1)	5.25	(1)	5.75	(1)
1959................	5.00	(1)	5.25	(1)	5.75	(1)
1960................	5.00	75.60	5.75	86.94	6.25	94.50
Peaches:						
1955................	5.00	(1)	5.50	(1)	6.00	(1)
1956................	5.15	(1)	5.50	(1)	6.00	(1)
1957................	5.25	(1)	5.75	(1)	6.25	(1)
1958................	5.25	(1)	5.75	(1)	6.25	(1)
1959................	5.30	(1)	5.80	(1)	6.30	(1)
1960................	5.50	83.16	6.25	94.50	7.00	105.84
Valencia:						
Apricots:						
1955................	2.00	(1)	(2)	--	2.75	(1)
1956................	2.75	(1)	(2)	--	3.50	(1)
1957................	3.00	(1)	(2)	--	3.75	(1)
1958................	3.50	(1)	(2)	--	4.00	(1)
1959................	3.50	(1)	(2)	--	4.00	(1)
1960................	3.50	52.92	(2)	--	4.25	64.26

[1] Substantial discrepancy between the official and free market exchange rates make it impossible to convert these peseta prices to meaningful U. S. dollar equivalents. In 1960, however, for the first time in many years the official and free market rates corresponded closely. An exchange rate of 60 pesetas to the U. S. dollar, the official rate, was used to convert 1960 peseta prices to U. S. dollar equivalent.

[2] Not available.

Canners' cost of high-quality raw apricots in 1960 averaged about $60 per short ton in Australia, $61 in South Africa, and $90 in the United States. In Spain the cost for unselected or orchard-run raw fruit delivered at the orchard ranged from $76 to $94 per ton. During the same season, high-quality peaches averaged about $80 per ton in Australia, $66 in South Africa, $57 in the United States, and in the Murcia area, $83 to $106 per ton was the price for unselected fruit at the orchard. After the canners pay for hauling to the plant and cull the undesirable fruit, their fresh fruit costs are considerably higher. Canners estimated that raw fruit suitable for canning--delivered at the plant--averages about $120 per ton for both apricots and peaches. They stated that at times the cost of apricots ran up to $150 per ton while peaches ranged from $90 to $140 per ton.

Many of the new plantings of deciduous fruits are being made by canners for the purpose of lowering the present high fruit costs and to provide more fruit for processing.

Labor and Wages

Spain possesses an abundance of labor. However, labor and management are faced with three problems: Unemployment, underemployment, and immobility. Spanish labor, except on farms, has minimum wages and various fringe benefits, so the wages of the agricultural worker remain at a low level compared with those received by U. S. agricultural workers.

Farm and Orchard

Though permanent workers for farm and orchard are available at low cost, temporary workers, used mainly for fruit harvesting, are paid higher wages.

Wages for permanent farm workers in 1960 were about $15 per month. These workers are furnished housing and some farm-produced food and receive paid vacation and regular bonuses.

Temporary workers received about $1.67 per 5-hour day in 1960. Competition for this temporary labor during the short harvesting period is partially responsible for the higher wages. Also, the temporary workers do not receive fringe benefits, and the income they receive during this short period is the only source of cash many have during the year. Many of the harvest workers were reported to migrate to France during the harvest season, attracted by the higher wages there, and thus adding to the labor competition.

Cannery

In the canneries observed, most of the labor force was female--about half of which were teen-age girls. The labor supply was reportedly abundant, and came from villages near the plants. Transportation was furnished by the canneries. Workers seemed industrious, and were neat, usually dressed in uniforms and caps. Inquiry disclosed no labor unrest. Wash rooms and eating facilities were provided.

Women were used exclusively in fresh fruit processing for canning, and also performed much of the manual work of moving fruit, filling and emptying cans, cartons, and so forth in baskets and pushcarts. Male workers usually operated the cannery machinery and trucks. Female workers were also used almost exclusively in tin can manufacture in the smaller plants. In the can manufacturing plant, females operated the machines under the supervision of male machinists.

Wages of the female workers--all temporary but having minimum wages and some fringe benefits--were reportedly averaging about 67 cents cash per 8-hour day--from 33 to 80 cents per day. Wages for overtime were increased 25 percent per hour. Canners reported that their average cost per female worker was about $1.00 per day--67 cents in wages and the remainder in fringe benefit costs.

In two of the larger plants visited, upward of 600 women were employed. During the peak canning periods, it was reported that the work force was often doubled.

The minimum wage schedule for Spanish cannery workers, by jobs which could be identified, during 1960 were:

	U. S. dol. per 8-hr. day
Fruit preservers:	
Male	0.74
Female	.45
Master	.93
Retort operators:	
Male	.63
Female	.42
Skilled	.64
Stoker	.67
Can manufacture:	
Solderers:	
Male	.67
Female	.46
Cutlers (female)	.45
Stampers (female)	.45
Packers:	
Male	.67
Female	.46
Gummers (female)	.45

It must be borne in mind that these wage rates are only minimum; also, they do not include the fringe benefits.

Processing

Background of the Spanish Industry

The Spanish deciduous industry began with the canning of apricots and peaches in water or natural juice packed in large containers--either the 5-kilo (11 pounds) tins or barrels. This is the so-called pulp pack, which, unlike the U. S. product, is actually firm ripe fruit with a small percentage of soft or broken fruit. The Spanish pulp pack is divided into grades according to the percentage of full halves. Three common grades are "90-95 percent," "80-85 percent," and "mature" fruit which does not have a set percentage of full halves. Sometimes there is also a special pack of 100 percent full halves.

Both the apricot and peach pulp packs were intended for export to the United Kingdom and the Continent for repacking under buyers' labels--as individual canned fruit or combined into fruit salad--or used for jams and marmalades. By importing this fruit pulp packed in water or natural juices, the importers were able to acquire the basic products without paying a duty on the sugar content.

The Spanish canning industry, recognizing the opportunities that the foreign market offered for fruits canned in sirup in consumer-size cans, began gradually to ship these products. The development of this portion of the Spanish industry has been difficult, although considerable progress has been made. Perhaps the most serious problem has been to establish unknown brands of variable quality in markets where well-known brands of canned fruits were established. Other problems have been to develop attractive containers and labels, improve and adopt processing methods and machinery suitable for the canning of these fruits in smaller containers, and obtain the additional capital required to implement these practices in a period when foreign exchange has been difficult to acquire.

The Spanish industry processes only a small share of its canned deciduous pack for the domestic market. The domestic pack has less attractive labels and sometimes its quality is not as high as that of the export pack.

The presence of Spanish canned fruits is now being felt on the world's export markets. Many of the larger canners have progressed to the point where, in quality, their product is rapidly overcoming buyers' prejudices which developed during the early period of exporting Spanish canned fruit in sirup. Also, their product is priced highly competitively. These canners have developed brand names through active advertising and promotional activities and are represented by well-known importing firms in the export markets. It is from these canners that increased competition in the export markets can be expected by the Australian, South African, and U. S. industries.

Spanish canners realize that to maintain and improve their position in the export market a consistently high-grade product is a must. The smaller canners who cannot or will not pack a consistent-quality, attractively packaged product will gradually disappear. Replacing them will be large canners who have the required knowledge and capital.

Canneries

Murcia is the center of Spain's fruit and vegetable canning industry. Of Spain's approximate 200 canning plants, about 150 are located in this area. Most of the remaining plants are in the Valencia area.

In the Murcia area--as in the other areas--the canning plants are scattered among the deciduous producing districts and vary greatly in size, capacity, and the products canned. In the Murcia area, some of the larger plants are located in Alcantarilla, El Palmar, Molina de Segura, Beniajon, Centi, and Murcia. Torrente, Alcira, and Valencia are important locations for canning plants in the Valencia area.

According to Spain's trade, about 90 percent of the fruit "pulp" and 70 percent of the fruits canned in sirup are packed in Murcia. It appears likely that the canners in the Murcia area will expand their canned fruits operation and increase the percentage and amount of fruits canned in sirup. It is the canners in the Murcia area who seem to be making Spanish canned fruits known in the export markets.

In equipment, most canneries are quite old fashioned compared to fruit-packing establishments elsewhere.

In a few smaller canneries, even simple fruit conveyors are not used. Girls bring fruit and cans to the preparation tables and carry away the filled cans to be hand-siruped and sealed. Other larger canneries use various types of conveyors and sorting belts--some reasonably efficient, some not.

In the plants visited, two types of mechanical peach pitters were seen--one a Spanish-built simple hand-operated device and the other an automatic machine which cut the peach and pit in half. In most plants, peach pitting is strictly a hand operation. Even plants which have pitters often use hand pittings because of less fruit waste.

Also, fruit is sliced by hand, and generally put into the cans by hand.

In two plants visited, up-to-date automatic revolving sirupers were in operation. All the other factories visited conveyed the fruit-filled cans under a hole-lined siruping pipe.

No vacuum closing machines were in evidence--old-fashioned exhaust boxes were being used instead. Most plants used open vat water cookers. In only two of the plants visited were continuous cookers and coolers in evidence.

Many types and vintages of double seamers were in use--from slow hand-fed machines to automatic 60-can-per-minute seamers.

Generally speaking, in the plants visited, regardless of lack of modern equipment and despite various operating methods, basic fundamentals of canning were being observed: Proper washing and preparation of raw material, exhausting, cooking, cooling, and so forth. Also, there was some grading of fresh fruit, especially peaches in those plants using mechanical pitters.

The canneries almost without exception--large or small, primitive or partly mechanized--were clean, and sanitation was excellent.

Well-equipped quality-control laboratories were observed in two plants visited. A few canneries had modern storage units for holding and ripening fruit, and all canneries appeared to have adequate warehouse space. Most cans are stacked bright.

Production

The larger Spanish canneries operate the year round, packing seasonal fruits and vegetables.

Figures on the size of Spain's canned deciduous pack are not usually available. However, the Spanish National Fruit Syndicate estimated the total 1958 canned pack at 3.3 million cases, equivalent 24-No. $2\frac{1}{2}$ cans, with a breakdown of production as follows:

	Cases of equiv. 24 No. $2\frac{1}{2}$ cans
Canned fruit in sirup:	
Peaches	607,320
Apricots	109,520
Other	89,600
Total	806,440
Fruit pulp:	
Apricots	1,787,100
Peaches	522,690
Other	149,340
Total	2,459,130
Grand total	3,265,570

Peaches in sirup are by far the most important of the canned fruits in sirup, in the "pulps" apricots are the most important.

In packing the institutional-size canned fruit packs, the cans are hand filled, solid pack and, in the case of apricot, halves are cupside down and of excellent quality. In some of the canneries visited where fruit salad and fruit cocktail was being packed, the quality was surprisingly good considering the old-fashioned packing methods. There was some lack of uniformity of components in each tin, the cans being filled by hand, with no actual count of each ingoing component. Fruit salad consisted of cling peach and pear slices, apricot halves, pineapple wedges, and cherries. Some of the fresh pears were being imported from Italy and the pineapple in No. 10 tins came from Kenya and South Africa. The cherries were treated with SO_2 and colored with Erythrosine (FD&C Red No. 3).

Spanish canners reported they were packing increasing quantities of vegetable specialty items and finding increased acceptance in the United Kingdom and the Continent. Some canners also reported that they were packing some vegetable items for the U. S. trade.

Citrus fruits, pears, cherries, plums, apples, and strawberries are also canned in sirup.

The same fruits are also made into marmalades and jams and glazed.

TABLE 7.--Spain's canned fruits, by variety, can size, and use

Variety	Size of cans[1]	Use
	Kilos	
Apricot and peach halves in water	5 and 3	Fruit pies and for re-packing abroad, for recanning in sirup, and for making fruit salads.
Ripe and sieved apricot and peach pulp	5 and 3	Confectionery and for general uses in making jams, nectar, juices, baby foods, pastry, etc.
Apricots, and peaches, canned in its juice	5 and 3	Pie fillings, jams, nectars, juices, baby foods, etc.
Apricots, peaches, fruit salad and fruit cocktail in sirup	3, 1, and 1/2	For direct consumption.

[1] Equivalent weights: 5 kilos=11.0 pounds; 3 kilos=6.6 pounds; 1 kilo=2.2 pounds; 1/2 kilo=1.1 pounds.

Peeled tomatoes, sweet red peppers, peas, artichokes, champignon de Paris, asparagus, French beans, and olives are also canned in consumer and institutional-size cans.

Quality

One of the major problems facing the Spanish canning industry is quality control. In the past there has been wide variation between individual canners and, at times, between the packs of individual canners. However, according to the U. K. importing trade, a slow continuing improvement in the quality of consumer-size canned peaches, apricots, and fruit salad has been noted.

To insure a greater acceptance of Spanish canned fruits in the importing countries, some of the leading canners reportedly are considering establishing minimum standards--similar to those of Australia and South Africa--for their export packs.

Sugar

Refined sugar is available to Spanish canners at the world market price rather than the artificially high internal price. Sugar imports are allowed free of duties and taxes if intended for export in processed form.

Can Manufacture

Each canner--even the smallest--makes his own tin cans. A few of the larger canners use modern equipment--power-operated slitters, trimmers, Italian-made body machines, compound coating machines for tin can ends, and high-speed double seamers. But the majority of the canners are less well equipped and, in most instances, the work is largely done by hand. All canners have double seamers for making 5-kilo tins.

In the Murcia area, there is a can-manufacturing plant. It has been in operation for nearly 2 years. The equipment is of Italian manufacture and consists of two completely automatic high-speed lines, one for the 5-kilo tins and the other adjustable for the principal consumer-size 16-ounce tins. The factory is operating to capacity, supplementing so far as possible each canner's own tin can manufacture. In the summer of 1960, an expert from one of the United States' largest can manufacturing companies was endeavoring to correct mechanical ills--mainly in the 5-kilo line--which reportedly have beset the factory since it opened.

Most canners stated that they would stop making their own cans when they could be assured that the can factory would provide their entire tin can requirements. This statement was made despite the fact that many canners could import tinplate and make their own cans cheaper than they could buy ready-made cans. Canners realized that good-quality ready-made cans would improve the appearance and standardize can sizes of the Spanish canned fruit pack.

The cost of tinplate is roughly $40 per 112 sheets (28"x20") or per 160 pounds f.o.b., British ports.

Spanish production of tinplate is inadequate for cannery requirements; thus, large amounts of foreign tinplate must be imported. England, the United States, and France are the usual supplying countries. At one time, foreign exchange limitations restricted tinplate imports, and in some cases the canning industry was unable to operate at capacity. This is not true in Spain now. An adequate supply of tinplate can be obtained since its importation was liberalized in 1959.

Labels and Labeling

In developing labels for its export pack of canned deciduous fruit, the Spanish canning industry follows the axiom, "The client buys with the eyes, a poorly presented product sells poorly."

Many Spanish labels are generally equal to those of the United States. Canners reported that their labels meet present labeling requirements of the United Kingdom and Western European countries.

The Spanish labels, developed through the photolithograph process, using brand names which retain the Spanish flavor, are multicolored and printed in several languages. Labels for use in specific countries are also made. Can contents are depicted in an attractive and appetizing manner. Consumer-size cans utilize this type of label; the industrial containers have the black-and-white identifying label.

Some of the larger canners have installed and are using automatic labeling machinery. However, some of the small canners still label by hand.

Canned Fruit Exports

World trade in canned deciduous fruits continues to expand. In 1959-60 the principal exporting countries shipped 15.9 million cases, 24-2½ equivalent, a 26-percent increase over the 5-year average of 1953-57. The United States continued to be the leading exporting country and in 1959-60 supplied about 38 percent of total deciduous exports. Australia, with about 25 percent, was second in that year, as in most years. The Union of South Africa and Spain have been competing for third place during the past few years. In 1957-58 and 1958-59, Spain was third--supplying about 19 and 20 percent, respectively. But in 1959-60, South Africa--with 18 percent of total exports--moved into third place, advancing over Spain's 15 percent.

TABLE 8.--Exports: Spanish canned apricot pulp in tins and barrels, by destination, average 1953-57, annual 1953-59

Country of destination	Year beginning July 1							
	Average 1953-57	1953	1954	1955	1956	1957	1958	1959[1]
	1,000 cases[2]	*1,000 cases*[2]	*1,000 cases*[2]	*1,000 cases*[2]	*1,000 cases*[2]	*1,000 cases*[2]	*1,000 cases*[2]	*1,000 cases*[2]
United States	0.3	0.5	0.5	0.5	--	0.1	42.7	1.5
Europe:								
Austria	52.6	--	47.8	1.0	141.2	72.9	125.4	39.5
Belgium-Luxembourg	233.3	173.8	158.1	248.6	307.1	279.0	222.5	138.3
Czechoslovakia	9.8	--	27.5	--	--	21.3	15.8	--
Denmark	18.5	3.9	8.6	25.3	41.6	13.4	10.3	5.4
Finland	14.0	18.7	9.0	2.9	34.8	4.6	53.7	19.1
France	83.7	--	20.1	57.1	263.9	77.4	184.2	21.4
Germany[3]	336.6	267.8	441.2	144.5	569.5	260.1	243.1	226.0
Iceland	5.4	.2	.4	17.1	6.2	2.9	2.4	.2
Ireland	9.2	8.7	8.9	5.1	9.5	13.8	13.6	5.5
Italy	2.4	--	--	12.2	--	--	78.3	5.1
Netherlands	131.4	89.3	84.3	177.9	154.8	150.8	145.5	101.0
Norway	.1	--	--	--	.4	.3	21.2	13.5
Sweden	9.8	4.8	6.1	8.3	26.0	3.6	5.8	4.5
Switzerland	75.2	38.6	98.6	40.4	104.2	94.1	73.1	33.1
United Kingdom	533.5	503.2	357.8	529.6	593.5	683.5	474.6	299.0
Other	3.4	--	--	3.2	.1	13.5	2.8	7.3
Total	1,518.9	1,109.0	1,268.4	1,273.2	2,252.8	1,691.2	1,672.3	918.9
Other countries:								
Canada	7.6	6.6	5.9	6.6	10.1	8.8	31.1	15.6
Other	72.7	30.5	208.5	113.5	8.8	2.1	92.0	595.8
Total	80.3	37.1	214.4	120.1	18.9	10.9	123.1	611.4
Grand total	1,599.5	1,146.6	1,483.3	1,393.8	2,271.7	1,702.2	1,838.1	1,531.8

[1] Country breakdown not available for January-June, 1960.

[2] Cases of equivalent 24 No. 2 1/2 cans.

[3] Classification as to East and West Germany not shown.

TABLE 9.--Exports: Spanish canned peach pulp by destination, average 1953-57, annual 1953-59

Country of destination	Year beginning July 1							
	Average 1953-57	1953	1954	1955	1956	1957	1958	1959
	1,000 cases[1]	*1,000 cases*[1]	*1,000 cases*[1]	*1,000 cases*[1]	*1,000 cases*[1]	*1,000 cases*[1]	*1,000 cases*[1]	*1,000 cases*[1]
United States	1.0	--	--	4.8	--	--	--	--
Europe:								
Austria	21.8	--	12.2	--	22.6	74.1	37.4	9.7
Belgium-Luxembourg	2.8	2.7	.1	1.9	7.3	2.0	2.4	.2
Denmark	13.8	8.3	15.9	8.7	13.4	22.9	20.4	3.4
Finland	5.8	--	10.0	.1	5.6	13.2	16.8	3.6
France	3.5	--	1.2	.5	6.4	9.2	23.8	--
Gibraltar	10.4	--	--	--	13.4	38.7	--	26.1
Germany[2]	16.3	15.0	20.9	9.5	12.7	23.5	27.8	39.0
Italy	--	--	--	--	--	--	7.4	8.2
Malta	1.6	--	--	2.1	--	6.1	11.0	--
Netherlands	5.1	1.5	6.1	1.2	11.3	5.4	6.0	3.5
Poland	1.8	--	--	--	--	8.8	2.6	.1
Sweden	3.6	.9	2.0	1.8	11.9	1.3	1.4	.9
Switzerland	5.1	2.3	8.6	1.6	2.1	11.1	5.9	.2
United Kingdom	251.9	148.1	224.9	325.8	211.8	349.1	183.2	119.1
Other	1.5	--	--	4.9	.9	1.3	14.6	1.8
Total	345.0	178.8	301.9	358.1	319.4	566.7	360.7	215.8
Other countries:								
Canada	2.4	--	--	12.1	--	--	--	--
Other	18.4	6.9	68.6	16.6	--	--	8.8	3.0
Total	20.8	6.9	68.6	28.7	--	--	8.8	3.0
Grand total	366.8	185.7	370.5	391.6	319.4	566.7	369.5	[3]309.6

[1] Cases of equivalent 24 No. 2 1/2 cans.

[2] Classification as to East and West Germany not shown.

[3] Preliminary. Country breakdown 6 months only. Total full season.

The Spanish canning industry besides being fairly similar to the Australian and South African industries in size of export pack is also similar to these industries in two other respects. First, all are dependent on the export market as an outlet for a high proportion of their canned fruit pack and secondly, the United Kingdom is their most important market.

Australia and South Africa exported about 71 and 73 percent in 1958-59 and 69 and 66 percent in 1959-60, respectively, of their total canned pack. Using the production estimate of the National Syndicate--3.3 million cases--and assuming no beginning or ending stocks, Spain exported 85 percent of its total canned deciduous production in 1958-59. On the other hand, the United States exported less than 10 percent of its total canned deciduous pack.

The majority of Spain's canned deciduous exports--by far--is accounted for by "pulps"--both apricot and peach. Canned apricot "pulp" exports have always been large, averaging about 1.6 million cases--24-$2\frac{1}{2}$'s equivalent--during the 5-year period, 1953-57. Canned peach "pulp" exports averaged 367,000 cases during this period, while fruits canned in sirup averaged 266,000 cases.

The United Kingdom has been one of the largest markets--and the biggest market most years--for Spain's canned apricot pulp. During the 5-year period, 1953-57, it took an average of 533,500 cases. Most of the Western European countries are also large buyers of Spanish apricot pulp. During this 5-year period Spain's exports averaged 336,600 cases to Germany, 233,300 to

TABLE 10.--Exports: Spanish canned deciduous fruits,[1] (other than pulp) by destination, average 1953-57, annual 1953-59

Country of destination	Year beginning July 1							
	Average 1953-57	1953	1954	1955	1956	1957	1958	1959
	1,000 cases[2]	1,000 cases[2]	1,000 cases[2]	1,000 cases[2]	1,000 cases[2]	1,000 cases[2]	1,000 cases[2]	1,000 cases[2]
United States..........	1.8	.2	--	6.7	1.3	.6	21.0	2.0
Europe:								
Austria...............	11.4	1.2	--	--	8.6	47.2	57.1	9.0
Belgium-Luxembourg....	2.6	--	--	4.9	4.8	3.3	18.5	23.8
Denmark...............	.2	--	--	.4	.1	.5	1.1	22.7
Finland...............	22.1	8.1	11.8	13.8	38.4	38.3	19.6	21.2
France................	1.4	--	.3	1.4	2.9	2.5	5.4	1.0
Germany[3].............	2.1	3.2	1.4	--	1.0	4.9	3.9	--
Iceland...............	2.9	5.4	2.1	2.0	3.1	1.8	1.0	.6
Netherlands...........	3.3	--	--	--	1.3	15.3	14.5	1.3
Norway................	--	--	--	--	--	--	141.2	40.6
Sweden................	11.2	.4	--	--	54.0	1.4	1.2	2.5
Switzerland...........	.2	--	--	--	--	1.1	6.4	8.8
United Kingdom........	196.7	10.4	23.6	153.6	223.2	572.7	285.0	319.9
Other.................	4.4	.9	--	--	1.0	20.3	20.8	4.0
Total..............	258.5	29.6	39.2	176.1	338.4	709.3	575.7	455.4
Other countries:								
Algeria...............	.2	--	--	--	.8	.1	.5	.8
Canada................	2.7	--	--	9.1	.9	3.3	.8	.5
Morocco...............	.9	.5	.8	.8	1.7	.8	1.0	1.7
Venezuela.............	.3	--	.1	.7	.5	.2	2.1	1.5
Other.................	1.8	1.3	.9	2.6	.6	3.8	5.1	3.8
Grand total.........	266.2	31.6	41.0	196.0	344.2	718.1	606.2	514.3

[1] Natural and sweetened, mostly peaches and apricots.
[2] Cases of equivalent 24 No. 2 1/2 cans.
[3] Classification as to East and West Germany not shown.
[4] Country breakdown six months only. Total full season.

Belgium-Luxembourg, and 131,400 cases to the Netherlands. France, Switzerland, and Austria are also large buyers.

Canned peach pulp exports have been much smaller than canned apricot pulp but are an important item. Since 1954-55, they have totaled over the 300,000-case (24-2½ equivalent) level, and in 1957-58 reached a high of 566,700 cases. The United Kingdom is the largest market for canned peach pulp and during the 5-year period (1953-57), shipments averaged 251,900 cases. Germany, Denmark, and Austria are also important markets--but to a much lesser extent.

For years, Spanish export statistics on fruits canned in sirup included all fruits and did not provide a breakdown among individual items. Beginning in 1953-54--when these data became available--Spain's exports of fruits canned, natural, and sweetened, and consisting mostly of apricots and peaches, totaled only 31,600 cases, 24-2½'s equivalent. By 1956-57, exports had increased to 344,200 cases and then soared to 718,100 in 1957-58. In the past 2 years, Spain's exports of canned deciduous fruits, natural and sweetened, fell from this height to the 500,000-600,000 range.

The best picture of the relevant importance of individual canned fruit items and the expansion of the Spanish industry can probably be seen in the U. K. import statistics, since the United Kingdom is one of the largest markets for Spanish canned fruits.

The U. K. Canned Fruit Market

Although not coming close to matching the quantity of imports from South Africa, Australia, and the United States, Spanish canned apricots, peaches, and fruit salad are being imported into the United Kingdom in increased quantities. In a few years, U. K. canned fruit imports from Spain are expected to increase further.

In the 5-year (1953-57) average of U. K. imports of canned apricots, peaches, and fruit salad, Spain was of minor importance, supplying less than 5 percent of these imports. But this was the awakening period of the Spanish industry. In 1959-60 when U. K. imports of canned apricots, peaches, and fruit salad had increased 56 percent over the 1953-57 average, U. K. imports of Spanish canned fruits were some 3½ times above this average and made up 11 percent of total U. K. imports.

While U. K. imports of canned apricots have been decreasing from the 5-year average, imports from Spain have been increasing. In 1959-60, Spain supplied about 15 percent of the United Kingdom's total canned apricot imports compared with less than 2 percent during the 1953-57 period.

TABLE 11.--Imports, United Kingdom: Canned deciduous fruits, by origin, average 1953-57, annual 1956-60

Commodity and country of origin	Average	Marketing season				
	1953-57	1956-57	1957-58	1958-59	1959-60	1960-61[2]
	1,000 cases[3]	*1,000 cases*[3]	*1,000 cases*[3]	*1,000 cases*[3]	*1,000 cases*[3]	*1,000 cases*[3]
Apricots:						
Argentina	(4)	--	37.5	24.4	15.6	1.7
Australia	524.0	384.5	291.3	371.2	234.4	165.7
South Africa	601.8	608.3	575.3	359.6	610.6	609.2
Spain	21.4	45.3	24.9	114.5	152.0	74.1
United States	29.6	3.2	2.8	1.2	--	18.1
Other countries	12.8	1.5	.9	1.0	10.1	10.4
Total	1,189.6	1,042.8	932.7	871.9	1,022.7	879.2
Peaches:						
Argentina	(4)	35.4	144.2	172.2	69.4	12.3
Australia	1,010.1	903.1	728.5	1,097.6	1,112.0	782.9
Canada	16.8	15.9	23.7	19.0	22.8	4.6
Japan	(4)	8.4	38.1	39.7	16.9	25.3
South Africa	922.6	1,200.3	1,459.3	1,553.7	1,799.5	1,793.6
Spain	147.9	182.0	551.2	298.8	377.0	291.0
United States	298.4	738.3	291.3	395.5	885.5	1,060.8
Other countries	51.4	28.4	90.7	41.4	60.5	18.6
Total	2,447.2	3,111.8	3,327.0	3,617.9	4,343.6	3,989.1
Fruit salad:						
Australia	45.0	33.8	107.8	32.0	11.3	13.8
Canada	5.0	13.9	3.0	2.4	(4)	(4)
Netherlands	7.2	24.6	2.8	2.1	3.8	(4)
South Africa	57.0	73.9	253.7	386.5	250.0	208.9
Spain	(4)	(4)	.5	4.5	104.9	180.4
United States	64.9	151.3	44.1	154.6	168.1	349.0
Other countries	8.6	4.1	3.7	11.4	57.4	29.2
Total	187.7	301.6	415.6	593.5	595.5	781.3
Grand total	3,824.5	4,456.2	4,675.3	5,083.3	5,961.8	5,649.6

[1] Calendar year.

[2] Eleven months June - April.

[3] Cases of equivalent 24 No. 2 1/2 cans.

[4] If any included in "other countries."

In 1959-60 also, U.K. imports of canned peaches from Spain--377,000 cases--accounted for about 9 percent of total imports. In the 5-year period (1953-57) Spain's share of U.K. canned peach imports averaged only 147,900 cases, 6 percent of the total. The largest amount of Spanish canned peaches imported into the United Kingdom was in 1957-58, when 551,200 cases were imported--equaling about 17 percent of total imports and exceeding imports from the United States. Imports from Spain in the 2 years since that period have not reached this level but do give an indication of the acceptance of the Spanish canned peaches in the U.K. market.

The major inroad Spanish canned fruits have made in the U.K. market is in fruit salad. Prior to 1957-58, U.K. imports of Spanish fruit salad were virtually nonexistent but, in 1959-60, 104,900 cases were imported. While imports of fruit salad from South Africa are larger than the 5-year average (1953-57), the increase in imports from Spain have replaced a considerable amount of South African fruit. This is one item in which Spain is expected to become one of the major suppliers in a few years.

According to the U.K. import trade, the quality of Spanish canned fruits is improving each year. But it has taken the low prices to attract some buyers to this fruit.

The price of Spanish canned apricots, peaches, and fruit salad fluctuates considerably within and between seasons, mostly because of quality variation between packers and even in the packs of individual canners.

During the 1960-61 season, a representative quotation of some of the better quality Spanish canned fruits in 16-ounce cans--per dozen exwharf London--were as follows:

	Dollars
Sliced peaches	2.00
Apricot halves	1.78
Fruit salad	2.20

The uncertainty of the quality classification makes it difficult to make price comparisons between Spanish canned fruit and that from the United States, Australia, and South Africa. However, in the winter of 1960-61 some representative quotations--U.S. dollars per dozen 16-ounce cans, exwharf London--show Spanish canned fruits to be priced lower than the canned fruits from these other sources:

Origin	Quality	Apricot halves	Peach slices	Fruit salad
Australia	Standard	1.96	2.17	2.59
South Africa				
Spain	Better quality	1.78	2.00	2.14
United States	Choice	[1]2.31	2.36	[2]2.62

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[1] C.i.f.

[2] Fruit cocktail.

Domestic Consumption

There are no statistics on Spain's domestic consumption of canned fruit. However, using the National Fruit Syndicate production estimate of 3.3 million cases in 1958, minus exports of 2.8 million cases, and assuming no net change in stocks, domestic consumption would roughly approximate 500,000 cases. In any case, Spain's per capita consumption is much lower than that of the major exporting countries--the United States, Australia, and South Africa. However, domestic consumption should increase gradually if the Spanish economy continues to show the improvements which have been made in the last few years.

Transportation

Spain has excellent truck, rail, and sea transportation facilities for shipping both fresh and canned fruits.

Modern trucks transport fresh fruit from the orchards to the canneries. Trucks are used to move canned fruits to rail and sea facilities and sometimes also for shipping canned fruits to foreign markets.

The Canned Food Fair is an annual event in Murcia, Spain's leading area for fruit and vegetable production and processing. At the left is the tower which rises about four stories above the fair grounds. It is composed of various cans of fruit items, and topped by a mechanical turtle and windmill. Pictured under this is one of the exhibition buildings. Below, some of the display booths, being readied for the fair's opening.

Most of Spain's fresh fruits are now shipped by truck or rail. Sea transportation, in the past, handled most fresh exports, but time lag and damage to fruits plus improved rail and truck service have caused this shift to rail or truck. Conversion from the wide-gage Spanish rail to the normal gage now only takes seconds--a considerable time saving from the past when cars had to be unloaded from the Spanish rail and reloaded to French cars. Now the same car is shipped through. The shipping time from the shipping points to London and Continent markets now takes from 18 to 36 hours compared with the 7 to 10 days by sea.

Some of Spain's canned fruits are shipped by rail, but most go by sea from the Port of Cartagena. Connected by excellent road and rail systems, Cartagena is located about 40 miles south of the largest canning area of Murcia. The Valencia area also has excellent road and rail systems and the port of Valencia.

National Canning Fair

A rapidly growing National Canning Fair is held annually in Murcia. Exhibitors of canned fruits comprise over half of the exhibits--vegetables, fish, and meats number over 600. Cannery machinery and equipment are also exhibited.

The site for the Fair, containing 15.8 acres, is located on the outskirts of Murcia. The fair grounds consist of three large exhibition buildings--two of which are two stories--and many individual booths which line a beautiful garden pavilion.

Attendance at the Fair--which lasts about 15 days--has been increasing and, during the past few years, has been over 1 million. According to Fair officials, acceptance of the Fair by the canning industry and the public has been very good and plans for expanding it into an international affair have been undertaken.

Besides the canned goods and machinery exhibits, lectures, panel discussions, and work shops on the various aspects of the canning industry are provided. Some of the topics discussed include technical problems of the industry, modernization and innovation in processing, packing, storage, and transportation facilities. The export and domestic situation of the Spanish canning industry also occupies an important position in these discussions.

Spanish Canners' Associations

There are canners' associations in both the Murcia and Valencia areas. The association of the Provinces of Alicante, Albacete, and Murcia--"Agrupacion De Conserveros,"--has over 150 members; while the association in Valencia--"Fabricantes De Conservas De Valencia y Costellon"--has a little less than 50 members.

The functions of these associations are much like those of canner associations in the United States, a major one being promotion of Spanish canned fruits. They participate in the National Canning Food Fair and in advertising and promotional activities in the major export markets. The associations work closely with the National Fruit and Vegetable Syndicate and the Spanish Government in promoting exports of canned fruits and vegetables and importing material and equipment needed by the canning industry.

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